

Evaluation of Solar Energy Potential in Malaysia

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Abstract: Most developing countries are facing the same problem of increasing population and pollution. This has led to the increase of energy consumption that forces them to seek for alternative energy other than depleting fossil fuel such renewable energy namely solar. Located in South East Asia, Malaysia is confronting with the same situation. In this study, the evaluation of potential of solar energy for three locations in Malaysia including Pontian, Kerteh and Teluk Intan is performed using HOMER software. Based on the results, Pontian generates the highest annual solar electricity generation of 543,509 kWh year⁻¹ due to the large size of 400 kW PV panel of the system. However, the cost of energy or also known as COE produced is expensive. On the other hand, with the highest solar radiation received in Kerteh, the PV stand-alone system requires lower size of 350 kW PV panel but at the same time is able to fulfil the demand with the lowest COE of \$0.442 kWh⁻¹ among other locations.

Keywords: Solar, HOMER software, pbc system

DOI: 10.3923/tb.2016.35.43